UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

UNIVERSAL CONNECTIVITY TECHNOLOGIES INC., Plaintiff, v. LENOVO GROUP LIMITED, Defendant.	Case No. 2:23-cv-00449-JRG **JURY TRIAL DEMANDED**

PLAINTIFF UNIVERSAL CONNECTIVITY TECHNOLOGIES INC.'S
<u>REPLY CLAIM CONSTRUCTION BRIEF</u>

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Plaintiff Universal Connectivity Technologies Inc. ("UCT") submits this reply claim construction brief to LGL's Responsive brief (Dkt. No. 113, "Resp."). For the reasons stated herein, UCT respectfully requests that the Court adopt its proposed constructions.

I.   Component Terms ("a preemption component that signals…", Claim 21 of the '905 Patent; "an identification component that identifies…", Claim 19 of the '798 Patent)

LGL fails to overcome the presumption that § 112 ¶ 6 <u>does not</u> apply. LGL purports that the term "component" is a "nonce" term and subject to § 112 ¶ 6. Resp. at 4. Yet, LGL does not argue that the "transmission component" is a nonce term, which is a claimed component in claim 21 of the '905 Patent and claim 19 of the '798 Patent. Dkt. No. 109 ("Br.") at 3. This is not surprising because courts have held the term "component" is not itself a nonce term subject to § 112 ¶ 6. *See, e.g., Lodsys, LLC v. Brother Int'l Corp.*, No. 2:11-CV-00090-JRG, 2013 WL 2949959, at *43 (E.D. Tex. June 14, 2013) ("[t]he word 'component' is not a 'nonce' word, but rather a common English language word that bears a structural connotation.").[1]

LGL is also wrong that the "preemption" or "identification" modifiers to the term "component" are not relevant. Resp. at 5. While the term "component" alone is not a nonce term, the terms "preemption component" and "identification component" convey further structural meaning to a POSITA. *See E2E Processing, Inc. v. Cabela's Inc.*, No. 2:14-CV-36-JRG-RSP, 2015 WL 4051423, at *6 (E.D. Tex. July 2, 2015) ("the 'prefix' that appears before a purported nonce word may impart structural meaning."). For example, the "preemption" and "identification" prefixes provide additional context for the terms by tying the claim terms to the relevant teachings

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[1] The fact that UCT cites to certain cases from this District that pre-date *Williamson* does not mean they should be ignored. Resp. at 5-6. First, the *Williamson* Court did not identify "component" as an exemplary nonce term. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) ("Generic terms such as 'mechanism,' 'element,' 'device,' and other nonce words that reflect nothing more than verbal constructs"). Second, *Williamson* only addressed whether the rebuttable presumption was "strong." Because prior cases from this District held the term "component" was not a nonce term irrespective of the strength of the presumption, those cases are still instructive.

of the patents, such as those that detail the "preemption" and "identification" functionality in connection with the transport, link, and physical layers of the claimed "communications device."

A.   The Claims Confirm The Component Terms Have Structural Meaning

LGL's attempt to disregard the interaction of the Component Terms with the "transmission component" fails. Resp. at 7. Even after *Williamson*, courts still look to the "entire body of the claim" to determine whether the "objectives and operations" of the term "are recited in detail in the claim itself." *R2 Sols. LLC v. Databricks, Inc.*, No. 4:23-CV-1147-ALM, 2024 WL 5058965, at *5 (E.D. Tex. Dec. 10, 2024). The "objectives and operations" of the "preemption component" and "identification component" are detailed in the claims. Br. at 2-4. For example, the claims recite how the Component Terms interact with the "transmission component" that transmits data packets to achive the claimed functionality. *CDN Innovations, LLC v. Grande Commc'ns Networks, LLC*, No. 4:20-CV-653-SDJ, 2021 WL 3615908, at *12 (E.D. Tex. Aug. 13, 2021) (claims "describe the structural interaction of the router and the Ethernet port ….").

B.   The Specification And Prosecution History Confirms The Component Terms Have Structural Meaning

The structural nature of the "preemption component" and "identification component" is further detailed in the '905 and '798 Patent specifications and confirmed by the prosecution history. *See E2E*, 2015 WL 4051423, at *6. For example, Figure 2 details the "components of the transport layer, link layer, and physical layer," which includes a "transmission component" (such as transmitter 231) that interacts with the "preemption component" and "identification component."[2] Br. at 4-5. The patents further detail "inputs and outputs" of the relevant

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[2] It is for this reason that LGL's reliance on *Media Rights* is unpersuasive. Resp. at 7. Unlike *Media Rights* that did not tie the relevant functionality to any structures, the '905 and '798 Patents teach how the relevant "preemption" and "identification" functionality are implemented through the structural transport, link, and physical layers of the communications protocol stack.

"preemption" and "identification" functionality. *Id.* at 6-7. For example, Figures 13 and 14 detail the packet preemption functionality, which is implemented through the link layer and transport layer in conjunction with the physical layer. '905 Patent at 20:42-44 ("In block 1401, the component of the transport layer retrieves the next packet from the transmit memory."); 20:64-67 ("In block 1410, the component signals the link layer to transmit a continue primitive …").[3] Further, Figures 10 and 11 detail that the identification functionality is executed in connection with "packet memory 211," which is a "component of the transport layer." '798 Patent at 18:46 – 19:10.

Finally, the prosecution history further underscores the structural nature of the Component Terms because neither the examiner nor applicant argued the terms were governed by § 112 ¶ 6.

C.   The Component Terms Are Not Indefinite

Should the Court find the presumption against § 112 ¶ 6 is overcome, LGL cannot meet its burden to prove by clear and convincing evidence that the claims are indefinite for lack of corresponding structure, and the Court should adopt UCT's proposed structure.

II.   The Logic Terms ('520 Patent, Claims 12, 19; '231 Patent, Claims 10, 16)

LGL fails to overcome the presumption that § 112 ¶ 6 does not apply. "'[L]ogic' is not a nonce word automatically subjected to the limitations of § 112 ¶ 6." *CDN Innovations*, 2021 WL 3615908, at *11 (collecting cases). LGL's reliance on *Egenera* does not compel a different result—the Federal Circuit did not generally hold that the term "logic" is a generic substitute for the word "means." *Egenera, Inc. v. Cisco Sys., Inc.*, 972 F.3d 1367, 1374-75 (Fed. Cir. 2020). Rather, as with any § 112 ¶ 6 analysis, the Federal Circuit considered the claims and disclosures at issue in reaching its conclusion. *Id.* at 1375 ("As used, 'logic' is no more than a 'black box recitation of

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[3] LGL's argument that the specification does not use the term "preemption component" in the specification is unavailing given that the "preemption" functionality is described in connection with a "component" of the link layer. *See* Br. at 5.

structure.'"). Here, the claims, specifications, and prosecution history demonstrate that the Logic Terms are structural and not subject to § 112 ¶ 6. Br. at 10-11.

A. The Claims Confirm The Logic Terms Have Structural Meaning

The '520 and '231 Patents delineate the "objectives and operation of the logic" to sufficiently connote structure to a POSITA. *Sonrai Memory Ltd. v. Oracle Corp.*, No. 1:22-CV-94-LY, 2022 WL 800730, at *8 (W.D. Tex. Mar. 16, 2022). For example, the '520 Patent details the interaction of the "logic to convert" and "logic to arbitrate" with other structural components, such as a "control bus" and "transmitter"/"receiver." Br. at 11-13. In addition, the '231 Patent delineates how the "logic to detect" and "logic to discover" operate in connection with other structural elements such as a "transmitter"/"receiver," "cable interface," and "pull down circuit" to achieve the claimed functionality. *Id.* at 13-14.

B. The Specification And Prosecution History Confirm The Logic Terms Have Structural Meaning

The '520 and '231 Patent specifications detail the structural nature of the Logic Terms. The patents explain that the Logic Terms may be performed by a "logic circuit," which is understood by a POSITA to refer to structure. Br. at 14-15, 16-17; *Netlist, Inc. v. Samsung Elecs. Co.*, No. 2:22-CV-00293-JRG, 2023 WL 8101855, at *12 (E.D. Tex. Nov. 21, 2023). As the Court found in *Netlist*, this case presents a similar situation where the "logic" is linked to other physical structures—such as a "control bus."

LGL's argument that UCT is somehow "rewriting" the terms as "logic circuits" fails. Resp. at 16. The relevant inquiry is "whether the stated objectives and operation of the logic connote sufficiently definite structure." *CDN Innovations*, 2021 WL 3615908, at *12. And, here, a POSITA understands that the Logic Terms connote structure given the '520 and '231 Patents' teachings that the recited functionality may be performed by "logic circuits." *See Netlist*, 2023

WL 8101855, at *12 (term not subject to § 112 ¶ 6 where specification disclosed "PLDs, ASICs, FPGAs, and CPLDs as 'logic elements.'"). The fact that a POSITA recognizes that the Logic Terms refer to structure demonstrates that LGL fails to rebut the presumption against § 112 ¶ 6. But that does not mean the Logic Terms must be construed to require "logic circuitry." Indeed, Dr. Madisetti's analysis is analogous to the Court's discussion in *Netlist*, where the Court looked to the teachings in the specification to determine that the "logic" terms were not subject to § 112 ¶ 6, but did not otherwise construe the terms.[4] *Netlist*, 2023 WL 8101855, at *12.

In addition, the '520 Patent teaches the "logic to convert" and "logic to arbitrate" functionality in a manner that connotes structure. Br. at 15-16. Contrary to LGL's arguments, the '520 Patent does not simply refer to the "function" of converting data packets—for example, it details how "HDMI control signals are <u>multiplexed together *on the control bus*</u> on a byte by byte basis." '520 Patent at 7:31-33. LGL fails to explain how "multiplexing" signals "on the control bus" can possibly be referring to generic software functionality, rather than hardware functionality (as maintained by Dr. Madisetti). Br. at 19.

The '520 Patent further details how the "logic to arbitrate" is tied to the operation of the "control bus" ("CBUS"). '520 Patent at 7:54-58 ("If it is determined that the CBUS is idle (having been unused for a certain number of cycles) …, then the use of the bus may be arbitrated 310."). LGL fails to explain how CBUS "cycles" are tied to anything other than hardware functionality.

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[4] The fact that the '520 and '231 Patents teach that the "present invention may also be downloaded as a computer program product" does not impact the analysis. Resp. at 17. The relevant claims are not directed to a "computer program product." The claims also implicate hardware functionality, such as using "logic to arbitrate use of the first control bus" in claim 12 of the '520 Patent and by detecting "a voltage value on the power bus" in claim 10 of the '231 Patent, meaning there is no basis for arguing the claims may be implemented solely through software.

Further, the '231 Patent also teaches the "logic to detect" and "logic to discover" in a structural manner. Br. at 16-18. For example, the '231 Patent teaches that the "logic to detect" is linked to the structural "HDMI-M transmitter chip 812 and HDMI-E receiver chip 832" illustrated in Figure 8. *Id.* at 18; '231 Patent at 8:56-59. As to the "logic to discover," the '231 Patent details how signals on the CBUS are used for device discovery:

> In some embodiments, the transmitter transitions to the pending state 504 upon detecting a logical '1' (+5V) on the VBUS 508. This signal implies that the transmitter is connected to an HDMI™ receiver, but that the transmitter has not yet been discovered by the receiver because the receiver is still driving a low signal onto the CBUS (which doubles as the HTPLG of the receiver).

'231 Patent at 7:38-44. The '231 Patent "logic to discover" is likewise tied to hardware functionality and not generic "software," as LGL contends. Resp. at 22.

C.   The Logic Terms Are Not Indefinite

Should the Court find the presumption against § 112 ¶ 6 is overcome, LGL cannot meet its burden to prove by clear and convincing evidence that the claims are indefinite for lack of corresponding structure, and the Court should adopt UCT's proposed structure.

III.   "in-band symbols" and "out-of-band symbols" ('905 Patent claims 1, 8, 15, 21; '798 Patent claims 20, 21)

In an effort to limit the number of disputes, UCT agrees that "in-band symbols" means "a symbol normally appearing in a packet" and "out-of-band symbols" means "a symbol not normally appearing in a packet." However, UCT's agreement is not premised on and in no way adopts LGL's reasoning and arguments concerning this term, which UCT does not agree with.

IV.   "synchronization primitive" ('798 Patent claims 11, 19, 28)

LGL's argument that the specification purportedly provides an "express definition of 'primitive'" (Resp. at 9) does not support limiting the construction for the term "**synchronization primitive**" to only "two" out-of-band symbols in light of LGL's admission that "the specification

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distinguishes between 'control primitives' and 'synchronization primitives.'" *Id*. at 9, n.3. Even

assuming LGL could show that the specification satisfies the "exacting" standard for lexicography

(it does not), those statements do not limit the scope of the term "synchronization primitive" in

light of the express embodiment where a **single** IDLE symbol is taught as an example of a

"synchronization primitive."   The dependent claims also confirm that a "synchronization

primitive" is not limited to specifically "two" symbols. LGL fails to persuasively distinguish this

intrinsic evidence for the term "synchronization primitive" by merely citing other sections of the

specification that discuss other embodiments of a "primitive."

LGL's purported definition for the term "primitive" comes from column 25 of the

specification (well after the concept of a "synchronization primitive" is first taught in detail) in

the context of one figure (Figure 22) and that is explained as simply "one embodiment" of a

"primitive." '798 Patent at 25:63-65. Critically, Figure 22 is not described as a "synchronization

primitive," and LGL fails to explain why the description of the embodiment in Figure 22 applies

to the term "synchronization primitive." That the specification describes different embodiments

of "primitives" with different formats is not surprising in view of LGL's admission that the

specficiation distinguishes between different types of primitives.

LGL also fails to distinguish UCT's evidence related to the actual term in dispute,

"synchronization primitive." LGL cannot dispute that the specification teaches that "[a]n IDLE

primitive may be a **synchronization primitive**." '798 Patent at 15:3-4. The specification further

teaches that the IDLE symbol may be **one or more** out-of-band symbols. *Id*. at 11:46-56 ("In one

embodiment, an IDLE symbol is <u>an</u> out-of-band symbol…. In one embodiment, a IDLE symbol

is actually a sequence of two out-of-band symbols….").   This "synchronization primitive"

embodiment should not be excluded from the scope of the claims. Moreover, LGL's attempt to

distinguish the dependent claims fails. Resp. at 11. Indeed, LGL admits that "the dependent claims do not set forth a 'precise number' of synchronization symbols that make up a 'synchronization primitive'" (*id.*), thereby confirming that the independent claims are not limited to "two" symbols. LGL's reference to the term "bit-string" does not support its argument because a "synchronization symbol" is a sequence of zeros and ones. *See, e.g.*, '798 Patent at 16:52-17:64 (describing embodiments of a "synchronization primitive" with 9-bit symbols).

V.   "periodically" ('231 Patent claim 10)

LGL does not attempt to argue that there is any disclaimer or lexicography that justifies limiting the plain and ordinary meaning of the common English word "periodically" to exclude the full scope of the term, which includes "irregular intervals of time." Instead, LGL seeks to improperly import a limitation from certain embodiments in the specification, even though the term "periodically" is not used in those embodiments. Moreover, the specification describes other embodiments without any timing limitation, which further confirms that the claims are not limited to any specific timing or regularity. '231 Patent at 2:4-15 ("If the transmitting device is in a disconnect state and a predetermined voltage is detected on the power bus, the transmitting device is transitioned to a pending state and **the control line is driven with a signal pulse**."). And even the embodiments cited by LGL show different timing values, such as 1ms or 100us. Resp. at 27-28. LGL misses UCT's point about the different timing values described for these embodiments—the fact that each embodiment provides for different signal timing confirms that the claims are not limited to the embodiments or any specific timing. There is simply no basis in the intrinsic evidence to limit the plain and ordinary meaning of the term "periodically."[5]

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[5] LGL's citation of *Netflix, Inc. v. Blockbuster, Inc.*, 477 F. Supp. 2d 1063, 1078 (N.D. Cal. 2007) is inapposite. Resp. at 28. That case involved a different term ("periodic fee") and a different

VI.   "standard protocol"/ "modified protocol" ('520 Patent claims 1, 12, 19; '231 Patent claim 18)

The terms "standard protocol"/"modified protocol" are not "time-related" like the claims at issue in *PC Connector Sols. LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1363 (Fed. Cir. 2005). Rather, the claims and specification use the term "modified protocol" as a relative term in comparison to a "standard protocol," which is not inherently time-limited. As such, *PC Connector* is inapposite because it involved a claim that was time-dependent. In particular, the claims at issue in *PC Connector* recited "each separate end user computer peripheral is **traditionally connectable** to a computer by means of an input/output port of the computer and the **standard input/output port** of the particular separate computer peripheral." *Id*. at 1361. In the context of that specific claim language, the Federal Circuit found that "traditionally connectable" referred to technologies existing at the time of the invention. *Id*. at 1363. However, *PC Connector* is inapplicable to claims, like those at issue here, where the claims are not inherently time-limited. *See, e.g.*, *Cellspin Soft, Inc. v. Fitbit, Inc.*, No. 17-CV-05928-YGR, 2021 WL 1417419, at *10 (N.D. Cal. Apr. 14, 2021) (distinguishing *PC Connector* "because the claims terms were inherently time-related"); *Soverain Software LLC v. Amazon.com, Inc.*, No. 6:04-CV-14, 2005 WL 6225276, at *5 (E.D. Tex. Apr. 7, 2005) (reviewing a claim term's methods, which referenced the use of "Hypertext transfer protocol" ("HTTP") and finding that "[t]here is no reason to think that one skilled in the art would think the claims were limited to only the then-current HTTP"). Similarly, LGL's other cited cases regarding claims that recite "Bluetooth" or "USB" standards are not applicable because the terms "standard protocol"/"modified protocol" do not recite a specific time-limited industry standard, like Bluetooth or USB. Resp. at 24-25.

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dispute ("Blockbuster contends that the fee could be for any period of time, while Netflix contends that the fee must be associated with the subscription period."). *Netflix*, 477 F. Supp. 2d at 1078.

The concern raised in those prior cases about encompassing "after-arising technologies" does not apply to the terms "standard protocol"/"modified protocol" because the invention here is not about any specific versions of industry protocols that existed at the time of the inventions. Rather, the invention is about the relative comparison between the "modified protocol" and the "standard protocol": "the modified protocol being a modification of the standard protocol that is not included in the standard protocol." In this context, the claim is just like other non-time-limited terms used in a patent like "mobile device" or "car" which are not limited to only devices that existed at the time of an invention. *See, e.g.*, *Cellspin*, 2021 WL 1417419, at *10 ("That rule makes sense because limiting technologies to a specific time would defeat infringement through differences that have no bearing on a person of ordinary skill in the art's understanding of a term—e.g., a car is no less of a car because it uses ignition in place of the original crank.").

VII.   "the first synchronization signal" ('103 Patent claim 17)

The Court should revise claim 17 to depend on claim 12 instead of claim 11. LGL fails to identify any other reasonable antecedent basis and does not argue that the prosecution history suggests any different interpretation. LGL merely argues that both claims 12 and 17 recite "a first forward unit of data of the forward units of data." Resp. at 30. But LGL fails to explain how this results in any ambiguity. There is no requirement that claim 17 be limited to only "**the** first forward unit of data" recited in claim 12; rather, claim 17's "**a** first forward unit of data" may refer to that data from claim 12 as well as additional data—in other words, "a" simply refers to one or more. Moreover, district courts frequently correct trypographical errors in the dependency of claims and the Court should do the same here.[6]

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[6] *See Ollnova Techs. Ltd. v. ecobee Techs., ULC*, No. 2:22-CV-00072-JRG, 2023 WL 2871051, at *9 (E.D. Tex. Apr. 10, 2023); *Image Processing Techs., LLC v. Samsung Elecs. Co. Ltd.*, No. 2:16-CV-505, 2017 WL 2672616, at *31 (E.D. Tex. Jun. 21, 2017).

Dated: April 18, 2025   Respectfully submitted,

                                         By: */s/ Brett Cooper*
                                         Brett E. Cooper (NY SBN 4011011)
                                         bcooper@bc-lawgroup.com
                                         Seth Hasenour (TX SBN 24059910)
                                         shasenour@bc-lawgroup.com
                                         Jonathan Yim (TX SBN 24066317)
                                         jyim@bc-lawgroup.com
                                         Drew B. Hollander (NY SBN 5378096)
                                         dhollander@bc-lawgroup.com
                                         Ashley M. Ratycz (IL SBN 6330321)
                                         aratycz@bclgpc.com
                                         BC LAW GROUP, P.C.
                                         200 Madison Avenue, 24th Floor
                                         New York, NY 10016
                                         Tel.: (212) 951-0100
                                         Fax: (646) 293-2201

                                         ***Attorneys for Plaintiff Universal Connectivity
                                         Technologies Inc.***

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served via electronic service on

April 18, 2025.

                                         /s/ Brett E. Cooper
                                         Brett E. Cooper

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